



Fig. 1.

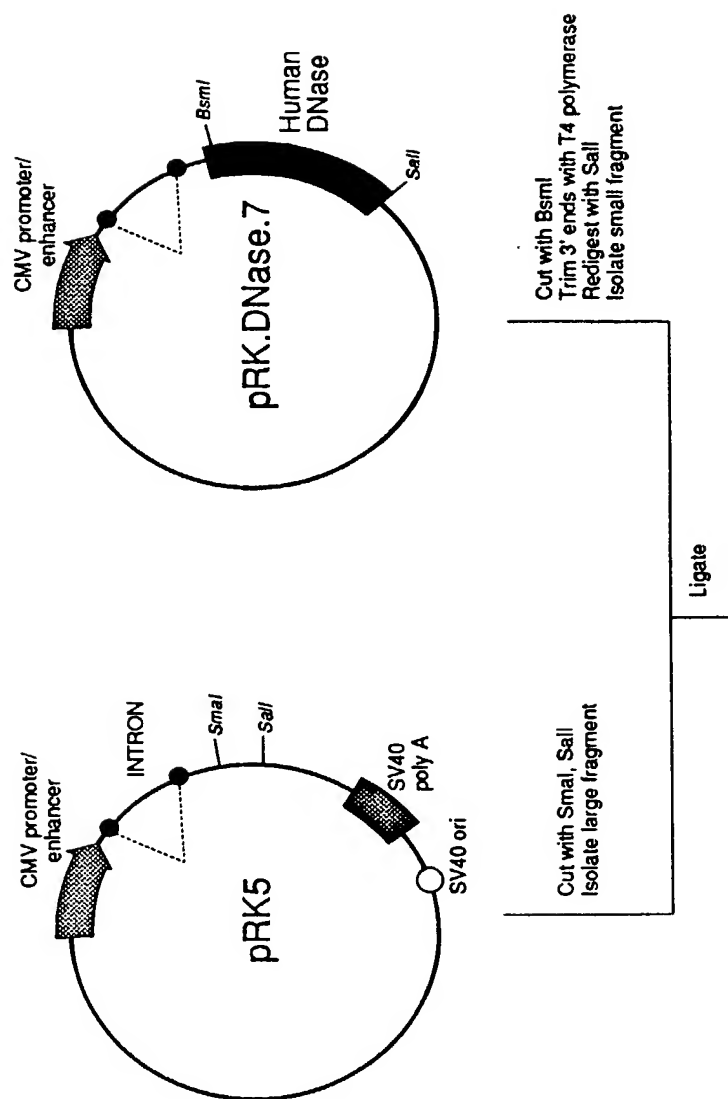
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	AGGACTGTGC	CGTCACGGAA	CTTCACGAAG	AACTCTCTGG	AAAGAAGTAT	CTGATGAAA	AAAGAATTT	CTCGTTTTC	CTCTTTAAAC	AGTAGTTTCC
1	SerCysThrG	lySerAlaLe	uLysCysPhe	PheArgAspL	eUerSerAM	*ThrThrPhe	PheSerLeuS	erSerLysAr	garGlysLeu	SerSerLysAsp
101	ATATTCCAGA	TTCCTTGACAG	CATTCTCGTC	ATCTCTGAGG	ACATCACCAT	CATCTCAGGA	TGAGGGGGAAT	GAAAGCTGCTG	GGGGCGCTGC	TGGCACTGGC
	TATAGGTCT	AAGAAGTGT	GTAAGAGCAG	TAGAGACTCC	TGTAGTGGTA	GTAAGTCTT	ACTCCCGTA	CTTCGACGAC	CCCCGCGAG	ACCGTGACCG
35	IleProAs	pSerOP*Gln	HisSerArgH	isLeuOP*G	yHishisHis	HisLeuArgM	etArgGlyMe	tLysLeuLeu	GlyAlaLeuL	euAlaLeuAla
201	GGCCCTACTG	CAGGGGGCCG	TGTCCTGTAA	GATCGCAGCC	TTCACATATC	AGACATTTGG	GGAGACCAAG	ATGTCCAATG	CCGCTCTCGT	CAGCTACATT
	CCGGATGAC	GTCCCCCGGC	ACAGGACTT	CTAGCGTCGG	AAGTTGTAGG	TCTGTAAAC	CCTCTGGTTC	TACAGGTTAC	GTGGGAGCA	GTCGATGTAA
68	AlaLeuLeu	GlnGlyAlav	alSerLeuLy	sileAlaAla	PheAsnileG	InThrPheG	yGluThrLys	MetSerAsna	laThrLeuVa	lSerTyrlle
301	GTGCAGATCC	TGAGCCGGCTA	TGACATCGCC	CTGGTCCAGG	AGTCAAGAGA	CAGCCACCTG	ACTCGCTGG	GGAAGCTGCT	GGACAACCTC	AATCAGGATC
	CACGCTTAGG	ACTCGCGAT	ACTGAGCGG	GACCAGGTCC	TCCAGTCTCT	GTGCGTGGAC	TGACGGCACC	CTTCGACGA	CCTGTTGGAG	TTAGTCTCTAC
101	valGlnIleL	eUerArgTy	rasPileAla	LeuValGlnG	luValArgas	pSerHisLeu	ThrAlaValG	lyLysLeuLe	uAspAsnLeu	AsnGlnAspAla
401	CACCAGACAC	CTATCACTAC	GTGGTCAGTG	AGCCACTGGG	ACGGAACAGC	TATAAGTCG	ATATTCTCTG	GCATGGACAA	GCACATGTCC	AGAGACCCA
	GTGGTCTGTG	GATAGTGATG	CACCACTCAC	TGGTGTGACC	TGCCTTGTGG	YargAsnSer	TyrLysGluA	rgTyrlleuPh	eValTyrrAr	ProAspGlnV
135	ProAspTh	rTyriHistyr	valValSerG	luProLeuG	YargAsnSer	TyrLysGluA	rgTyrlleuPh	eValTyrrAr	ProAspGlnV	alSerAlaVal
501	GGAGCTGATC	TACTACGATG	ATGGTTCGGA	GCCTTGCGGG	AACGACACCT	TCAACCCGAG	GCCAGGCATT	GTACAGTTCT	TCTCCCGGTT	CACAGAGGTC
	CCTGTGCTATG	TATAGTCTAT	TACCGACGCT	CGGGACGCC	TTGCTGTGGA	AGTTGGCTCT	CGGTGCTTAA	CAGTCCAAGA	AGAGGGCCAA	GTGTCTCCAG
168	AspSerTy	TyrTyraSp	spGlyCysG	uProCysGly	AsnAspThP	heAsnArgG	uProAlaile	valArgPheP	heSerArgPh	eThrGluVal
601	AGGAGTTTG	CCATTGTTCC	CCTGCATGCG	GCCTTGCGGG	ACCAGATAGC	CGAGATCGAC	GCTCTCTATG	ACGTCTACCT	GGATGTCCAA	GAGAAATGGG
	TCCCTCAAAC	GTTAAACAAG	GGACGTACGC	CGGGCCCCC	TGGCTCATCG	GCCTAGCTG	CGAGAGATAC	TGAGATGGA	CCTACAGTT	CTCTTTACCC
201	ArgGluPheA	laileValPr	oLeuHisAla	AlaProGlyA	spArgValAl	agluileasp	AlaLeuTyra	spValTyrl	uaspValGln	GluLysTrpGly
701	GTTTGGAGGA	CGTCAATGTTG	ATGGGCGACT	TCAATGCGGG	CTGCAGCTAT	GTGAGACCTT	CCCAGTGGTC	ATCCATCCGC	CTGTGCACAA	CCCCACCTT
	CGAAGCTCCT	CGAGTACAAC	TACCCGCTGA	AGTTACGCC	GACGTCGATA	CACCTCTGGA	GGGTACACAG	TAGTAGGCG	GACACCTGTT	CGGGGTGAA
235	LeuGluAs	pValMetLeu	MetGlyAspP	heAsnAlaG	yCysSerTy	valArgProS	erGlnTrpSe	rSerileArg	LeuTrpThrs	erProThrPhe
801	CCAGTGGCTG	ATCCCCGACA	CGGTGACAC	CACAGCTACA	CCCACGCACT	GTCCCTATGA	CAGGATCGTG	GTTCAGGGGA	TGCTGCTCCG	AGGCGCGCTT
	GGTCAACGAC	TAGGGGCTGT	CGCGACTGTG	GTCTCGATGT	GGGTGCTGA	CACGGATACT	GTCTCTACAC	CAACGTCCCT	ACGACAGGC	TCCGCGGCAA
268	GlnTrpLeu	lleProAspS	erAlaAspTh	rThrAlaThr	ProThrHisc	yslaTyrras	pargileVal	valalaGlyM	etLeuLeuAr	gGlyAlaVal
901	GTTCCCGACT	CGGCTCTTCC	CTTTAACTTC	CAGGCTGCCT	ATGGCCTGAG	TGACCAACTG	GCCCAAGCCA	TCAGTGACCA	CTATCCAGTG	GAGGTGATGC
	CAAGGCTGA	GCCGAGAAG	GAAATTTGAAG	GTCCGACGGA	TACCGGACTC	ACTGGTTGAC	CGGGTTCGGT	AGTCACTGGT	GATAGTTCAC	CTCCACTACG
301	valProAspS	erAlaLeuPr	opheasnPhe	GlnAlaAlat	yrGlyLeuSe	raspGlnLeu	AlaGlnAlaI	leSerAspHi	sTyrrProVal	GluValMetLeu
1001	TGAAGTACG	AGCCCTCTCC	CACACCAATT	GAACTGCAG	ACTTCACTCG	TCGGGGAGGG	GTGTGTTCAA	CTTGACGTC	LyOp*Ala	ProProHisThrSero
335	LyOp*Ala	ProProHis	ThrSero	p*Thrala						



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Fig. 3.



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Fig.3(cont.)

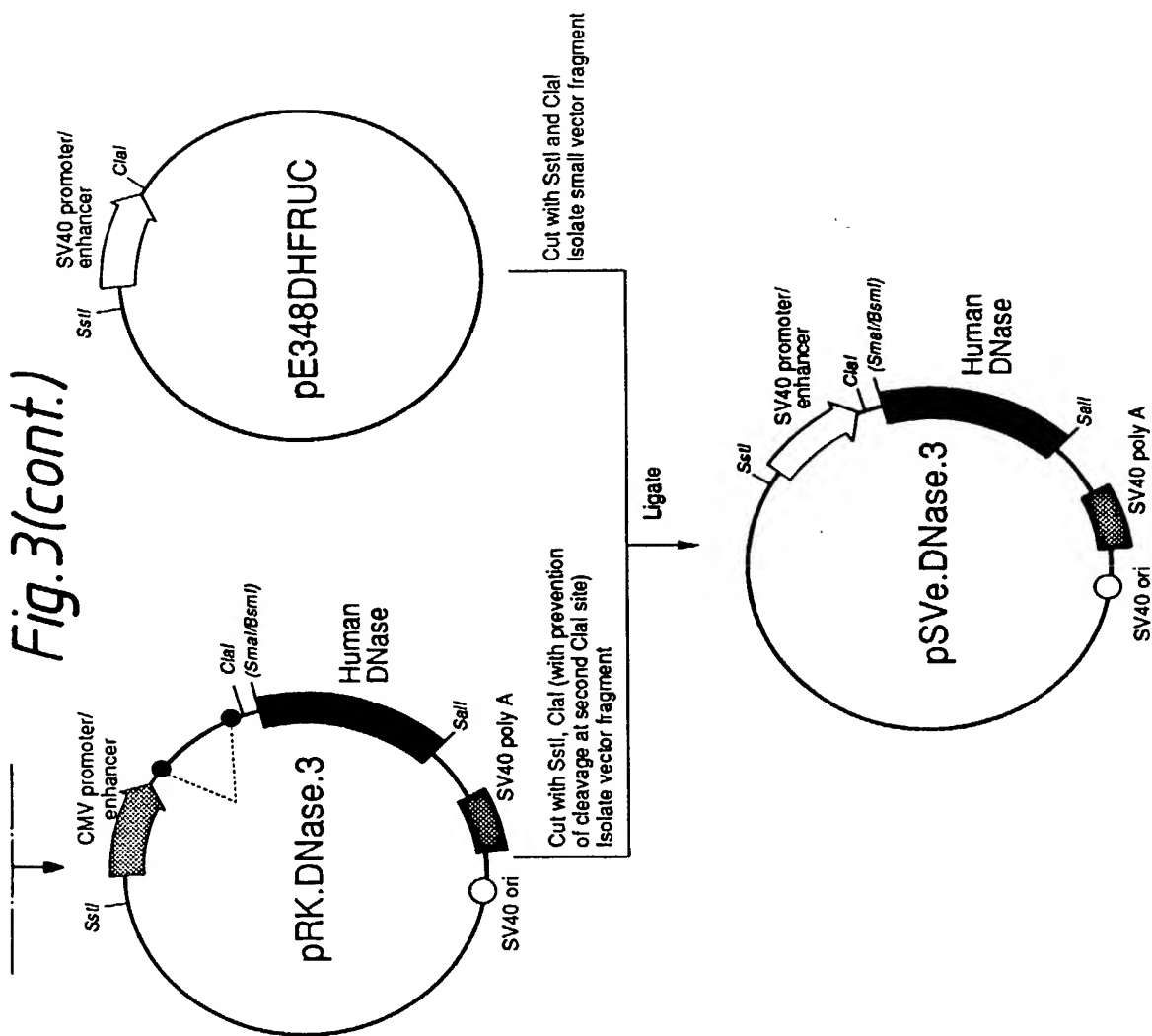
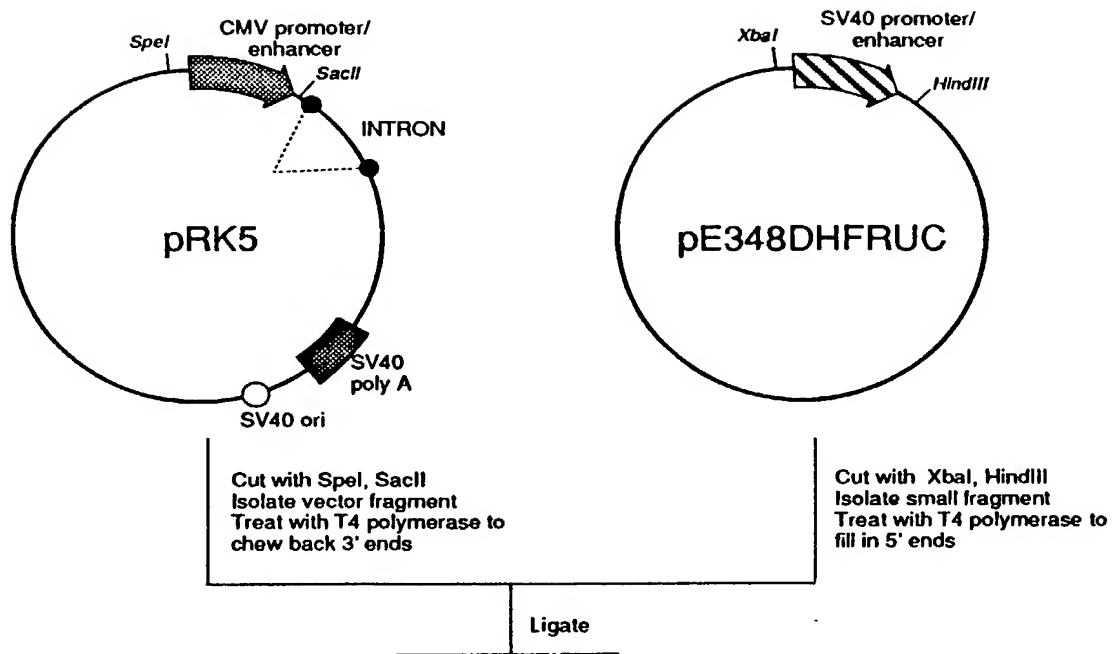


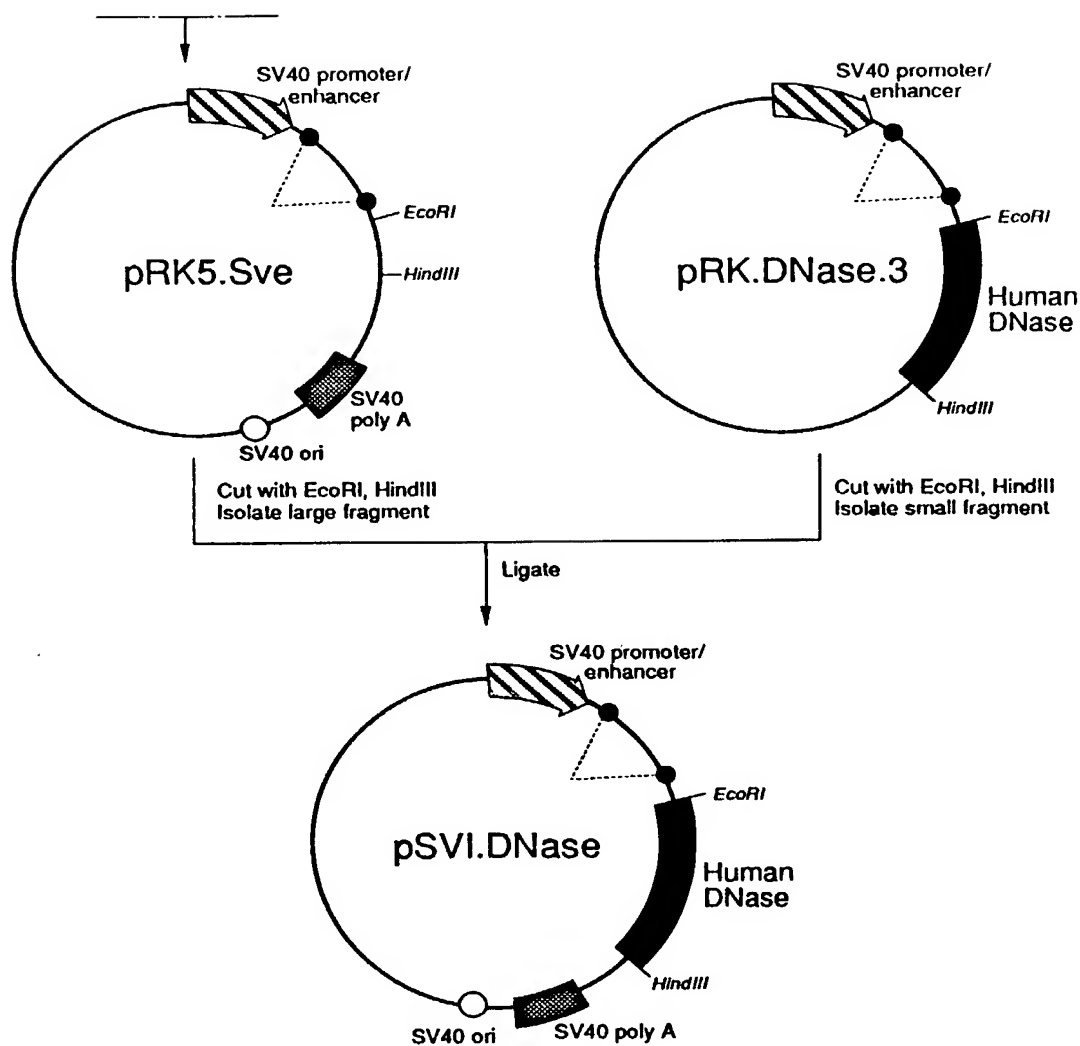
Fig.4.



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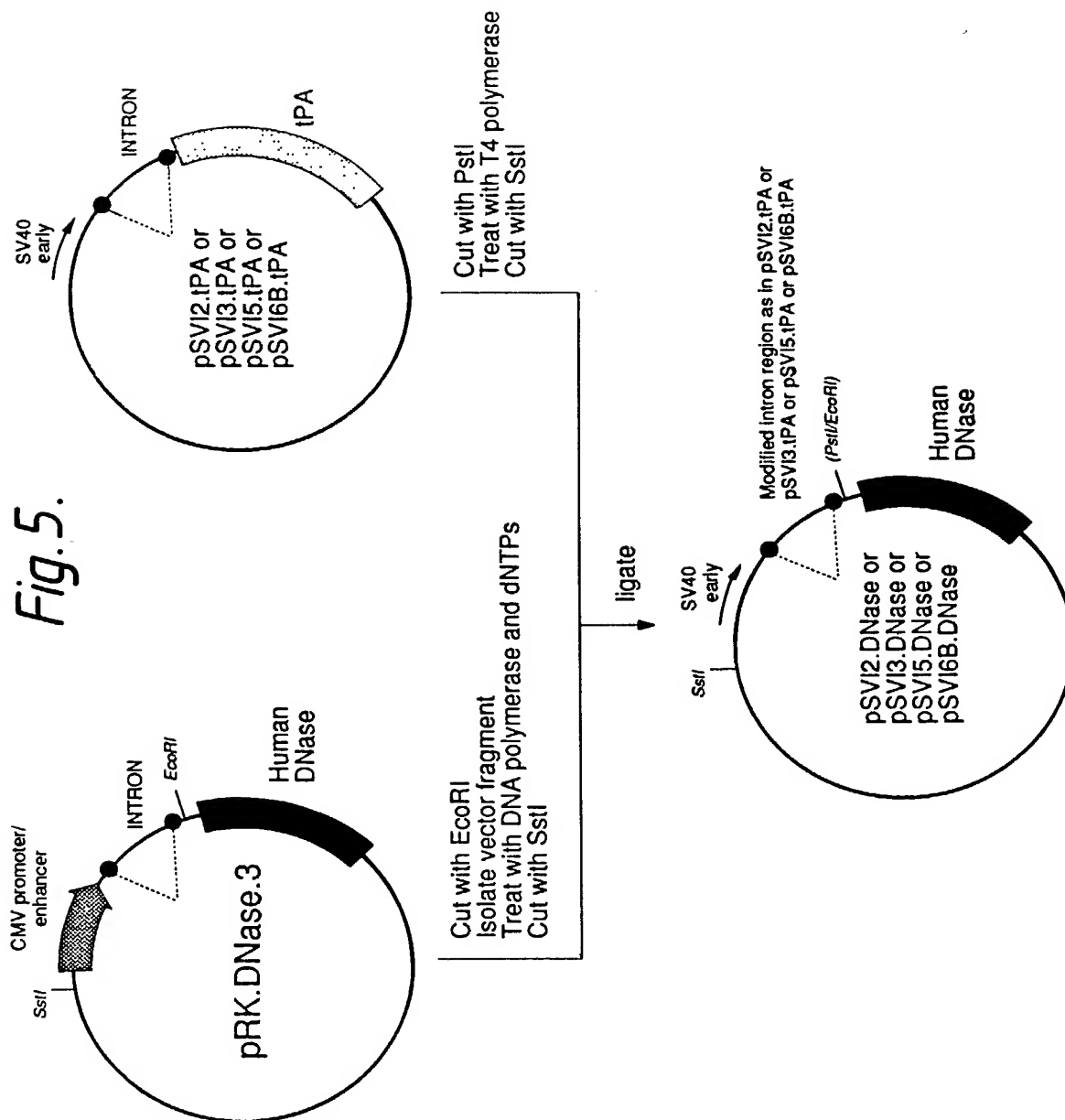
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Fig.4 (cont.)



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Fig. 5.



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```

sau96I
avaII
asul
scrFI
ecorII
bstNI

mseI
note ATG
hphI
sp6 RNA start
fokI

501 TTAATACATA ACCTTATGTA TCATACACAT ACGATTTAGG TCACACATATA GAATAACATC CACTTTGGCT TTCTCTCCAC AGGTGTCCAC TCCCAGGTCC
AATTATGTAT TGGAATACAT ACGATGTGTA TCGTAAATCC ACTGTGATAT CTTATTGTAG GTGAACCGA AAGAGAGGTG TCACAGGTG AGGTTCCAGG

        bspMI
        aluI      pstI
        hindIII   fnu4HI
        mnlI      ddeI      bbvI          mseI      hgaI

1 cloning linker
601 AACTGCACCT CGGTTCTAAG CTTGGGGCTGC AGGTCGGCT GAATTTAAGG GACGCTGGA AGCA
TTGACGTGGA GCCAASATTC GAACCCGACG TCCAGCGGCA CTTAAATCC CTGCGACACT TCGT

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LEONARD, ROBERT



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Fig. 7(cont.)

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sau96I
avaII
asuI
scrFI
ecorII
bstNI

mseI          note ATG          hphI          foki          sp6 RNA start
501 TTAATACATA ACCTTATGTA TCATACACAT ACGATTATTAGG TGACACTATA GAATACATC CACTTTGCCT TTCTCTCCAC AGGTGTCCAC TCCCAGGTCCT
AATTATGTAT TGGATACAT AGTATGTGTA TGCTAAATCC ACTGTGATAT CTTATTGTAG GTGAACGGA AAGAGAGGTG TCCACAGGTG AGGGTCCAGG

                                bspMI
                                pstI
                                fnu4HI
                                bbvI
                                mnlI          ddeI          aluI          hindIII          mseI          hgaI
1  cloning linker
601 AACTGCACCT CGGTCTTAAG CTTGGGCTGC AGTCGCCCGT GAATTTAAGG GACGCTGTGA AGCA
TTGACGTGGA GCCAAGATTC GAACCCGACG TCCAGGGGCA CTTAAATTCC CTGCGACACT TCGT
```

Fig. 8.

aluI
 sstI
 sacI
 hgiII
 hgiAI
 bspI286
 banII
 taqI
 1 TTGAGCTCG CCCACATTG ATTATTGACT AGAGTCGACA GCTGTGGAAT GTGTGTGAGT TAGGGTGTGG AAAGTCCCA GGCTCCCGAG CAGGCAGAAG
 AAGCTCGAGC GGGCTGTAAC TAATAACTGA TCTCAGCTGT CGACACCTTA CACACAGTCA ATCCACACC TTTCAGGGGT CCGAGGGGTC GTCCGTCTTC
 nlaIV
 scrFI
 ecorII
 bstNI
 pleI aluI
 hinfI pvuII
 accI
 101 TATGCAAGC ATGCATCTCA ATTAGTCAGC AACCAAGTGT GGAAGTCCC CAGGCTCCCC AGCAGGAGCA AGTATGCAAA GCATGCACTT CAATTAGTCA
 ATACGTTTCG TACGTAGAGT TAATCAGTCG TTGGTCCACA CCTTCAGGG GTCCGAGGG TCGTCCCTCT TCATACGTTT CGTACGTAGA GTTAATCAGT
 nsII
 avaiII
 nlaIII
 sphi
 nspCIX
 sfani
 nsII
 avaiII
 nlaIII
 sphi
 nspCIX
 201 GCAACCATAG TCCCGCCCTT AACTCCGCC ATCCGCCCTT TAACCTCGCC CAGTTCGCC CATTCCTCGC CCCATGGCTG ACTAATTTTT TTTATTATTG
 CGTTGGTATC AGGGCGGGA TTGAGCGGG TAGGGCGGG ATTGAGCGG GTCAAGCGG GTAAGAGCG GGTACCGAC TGATTAAAAA AAATAAATAC
 foki
 bstI
 ncoI
 301 CAGAGGCCGA GGCGGCTCG GCCTCTGAGC TATTCAGAA GTAGTGAGGA GCCTTTTTCG GAGGCTTAGG CTTTTCGAAA AGCTTATCC GGCGGGGAA
 GTCTCCGGCT CCGGCGGAGC CGGAGACTCG ATAGGTCTT CATCACTCTT CGAAAAAAC CTCGCGATCC GAAACGTTT TTCGAATAGG CGGCCCCCTG
 hinfI
 bstXI
 thal
 fnuDII
 bstUI
 401 GGTGCATTG AACGGGATT CCCCGTGCCA AGAGTCAGGT AAGTACCGC TATAGAGTCT ATAGGCCAC CCCTTGGCT TCCTAGAAC CGGCTACAA
 CCACGTACC TTGGCCCTAA GGGGCACGGT TCTCAGTCCA TTCATGCGG ATATCTCAGA TATCCGGGTG GGGGAACCGA AGCAATCTTG CGCGCATGTT
 scrFI
 nciI
 mspI
 hpaII
 haeIII
 xmaIII
 eagI
 eaeI
 cfrI
 aluI mspI cauII
 hindIII hpaII
 fnuDII
 bstUI
 aseI
 sp6 promoter
 thal
 fnuDII
 bstUI
 aseI

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Fig.8(cont.)

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sau3AI
mboI
cpnI
alwI
xhoII
nlaIV
bstYI
bamHI
alwI
removed ATG lariat consensus
501 TTAATACATA ACCTTTTGGG TCCTATAGAC TGACATCCAC TTTGGCTTTC TCTCCACAGG TGTCCACTCC CAGGTCCAAC TGCACCTCGG TTCGAAGCTT
AATTATGTAT TGGAAACCT AGGATATCTG ACTGTAGGTG AACGGAAG AGAGGTGTC ACAGGTGAGG GTCCAGGTG ACGTGGAGCC AAGCTTCGAA
mseI
bspMI
pstI
fnu4HI
bbvI
mseI hgaI
1 GGGCTGCAGG TCGCCGTGAA TTTAAGGGAC GCTGTGAAGC A
601 CCGGACGTCC AGCGGCACCT AATTCCTG CGACACTTCG T
```

Fig. 9.

aluI
 sstI
 sacI
 hgiIII
 hgiAI
 bspI286
 banII
 taqI
 1 TTCGAGCTCG CCCGACATTG ATTATTGACT AGAGTCGACA GCTGTGGAAT GTGTGTCAGT
 AAGCTCGAGC GGGCTGTAAC TAATAACTGA TCTCAGCTGT CGACACCTTA CACACAGTCA

taqI
 salI
 hindIII
 hincII
 accI
 pleI aluI
 hinfI pvuII

nlaIV
 scrFI
 ecorII
 bstNI
 61 TAGGGTGTGG AAAGTCCCCA GGCTCCCCAG CAGGCAGAAG TATGCAAAGC ATGCATCTCA
 ATCCACACACC TTTCAGGGGT CCGAGGGGTC GTCCGTCTTC ATACGTTTCG TACGTAGAGT

nsiI
 avaIII
 nlaIII
 sphI sfaNI
 nspCIX

nlaIV
 scrFI
 ecorII
 bstNI
 121 ATTAGTCAGC AACCAGGTGT GGAAAGTCCC CAGGCTCCCC AGCAGGCAGA AGTATGCAAA
 TAATCAGTCG TTGGTCCACA CCTTTCAGGG GTCCGAGGGG TCGTCCGTCT TCATACGTTT

sfaNI
 nsiI
 avaIII
 nlaIII
 sphI
 nspCIX
 181 GCATGCATCT CAATTAGTCA GCAACCATAG TCCCGCCCCT AACTCCGCCC ATCCCGCCCC
 CGTACGTAGA GTTAATCAGT CGTTGGTATC AGGGCGGGGA TTGAGGCGGG TAGGGCGGGG

foki

nlaIII
 styI
 ncoI
 241 TAACTCCGCC CAGTCCGCC CATTCTCCGC CCCATGGCTG ACTAATTTTT TTTATTTATG
 ATTGAGGCGG GTCAAGGCGG GTAAGAGGCG GGGTACCGAC TGATTAAAAA AAATAAATAC

bsrI

fnu4HI
 bglI
 sfiI ddeI
 haeIII haeIII haeIII mnlI
 mnlI mnlI mnlI mnlI aluI mnlI
 301 CAGAGGCCGA GGCCGCCTCG GCCTCTGAGC TATTCAGAA GTAGTGAGGA GGCTTTTTTTG
 GTCTCCGGCT CCGGCGGAGC CGGAGACTCG ATAAGGTCTT CATCACTCCT CCGAAAAAAC

scrFI
 nciI
 mspI
 hpaII
 haeIII
 xmaIII
 eagI
 eaeI
 cfrI
 styI
 avrII
 haeIII
 stuI
 haeI
 mnlI
 361 GAGGCC TAGG CTTTTGCAAA AAGCTTATCC GGCCGGGAAC GGTGCATTGG AACGCGGATT
 CTCCGGATCC GAAAACGTTT TTCGAATAGG CCGGCCCTTG CCACGTAACC TTGCGCCTAA

hinfI
 thaI
 fnuDII
 bstUI

aluI mspI cauII
 hindIII hpaII

bstXI
 sau96I
 haeIII
 asuI
 pleI
 hinfI
 rsaI
 421 CCCC GTGCCA AGAGTCAGGT AAGTACCGCC TATAGAGTCT ATAGGCCAC CCCCTTGCT
 GGGGCACGGT TCTCAGTCCA TTCATGGCGG ATATCTCAGA TATCCGGGTG GGGGAACCGA

U1 matched splice donar

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Fig. 9(cont.)

```

sau3AI
mboI
dpnI
alwI
xhoII
nlaIV
bstYI
bamHI
alwI
removed ATG
sp6 promoter
fnu4HI
thai
fnuDII
bstUI
mseI
aseI
481 TCGTTAGAAC CGGGCTACAA TTAATACATA ACCTTTTGGG TCCTACTAAC TACTGACTTA
AGCAATCTTG CGCCGATGTT AATTATGTAT TGGAAACCT AGGATGATTG ATGACTGAAT
U2 match lariat consensus
sau96I
avaII
asuI
scrFI
ecorII
bstNI
thai
fnuDII
bstUI
mnlI
nruI hindIII
cloning linker
541 TTCTTTTCCT TTCTCTCCAC AGGTGTCCAC TCCACAGGTG AGGTCCAGG TTGACGTGGA GCCAAGCGCT
AAGAAAAGGA AAGAGAGGTG TCCACAGGTG TCCACAGGTG TCCACAGGTG TCCACAGGTG TCCACAGGTG TCCACAGGTG
601 AGCTTGGGCT GCAGGTGCGC GTGAATTTAA GGGACGCTGT GAAGCA
TCGAACCCGA GTCCAGCGG CACTTAAAT CCGTGGGACA CTTCGT
bspMI
pstI
fnu4HI
aluI
bbvI
mseI
hgaI
1
```

Fig. 10.

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Fig. 10(cont.)

```

sau3AI      sau96I      thal aluI      cloning linker
mboI        avail      fnuDI        ACTGCACCTC GGTTCCGGA
dpnI        asuI        bstUI        GGTGTCCACT CCCAGGTCCA
alwI        scrFI       ecorII       GGTGTCCACT CCACAGGTGA
xhoII       bstNI      mnII         GGTGTCCAGGT TGACGTGGAG
nlaIV       foki       nruI         CCAAGCGGTT
bstYI
bamHI
alwI
removed ATG
mseI        U2 match

lariat consensus
IgG vH natural lariat restored
501 TTAATACATA ACCTTTTGGG TCCTACTGAC ACTGACATCC ACTTTTCTT TTTCTCCACA GGTGTCCACT CCCAGGTCCA GGTGTCCAGGT TGACGTGGAG CCAAGCGGTT
AATTATGTAT TGAATAACCT AGGATGACTG TGACTGTAGG TGAATAAGAA AAAGAGGTGT CCACAGGTGA GGTGTCCAGGT TGACGTGGAG CCAAGCGGTT

        bspMI
        pstI
        fnu4HI
        bbvI
        mseI      hgaI

1 601 CCTTGGGCTG CAGGTCGCCG TGAATTTAAG GGACGCTGTG AAGCA
CGAACCCGAC GTCCAGCGGC ACTTAAATTC CCTGCGACAC TTCGT
```



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Fig. 11.

